

Coursera Capstone Project

Location to open new Casino/Lounge in Kuala Lumpur,
Malaysia

By: Ashutosh Agrawal

Aug 2020

Business Problem

- The place to open a new Lounge/Casino is the biggest part for its success or the failure.
- The crowd and the competition is the reason for the growth of such investments.

Business Questions

- ❑ Where would you suggest an investor to open a Lounge/Casino in the Kuala Lumpur, Malaysia?

Required Data

- List of neighbourhoods for the city of Kuala Lumpur, Malaysia
- Coordinates of the neighbourhoods
- Venue categories in the neighbourhood

Sources:

- Neighbourhood data from wikipedia page:
 - https://en.wikipedia.org/wiki/Category:Suburbs_in_Kuala_Lumpur
- Lat-Long coords using Geocoder package in python
- FourSquare APIs to fetch Venues data of the neighbourhoods

Methodology used

- Fetching neighbourhood data from wiki page using web scraping(BeautifulSoup package in python).
- Fetching geographical coordinates of the fetched neighbourhoods.
- Plotting the fetched data for the Kuala Lumpur city(using Folium library in python).
- Fetching the Venues details of the neighbourhoods using FourSquare API.
- Grouping the fetched venues data on the neighbourhoods on the basis of the occurrence of the venues category.

Methodology used (Continued)

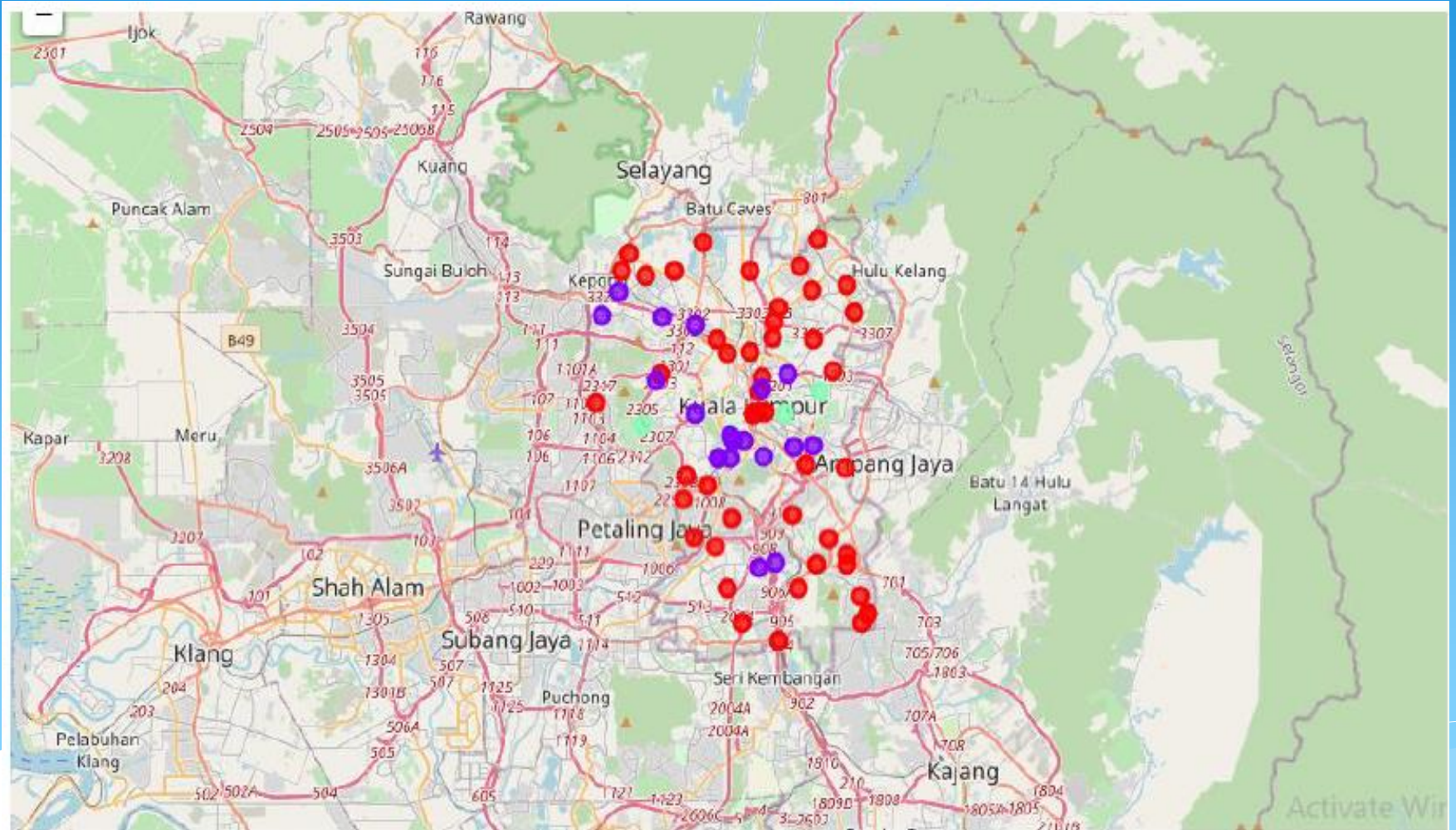
- Forming the dataframe on the basis of venues category present in the data using Pandas package in python.
- Filtering the data on the “Casino” and the “Lounge” and forming the new dataframe.
- Applying the K-means clustering algorithm to cluster the data points into 3 clusters.
- Visualization of the formed clusters using Folium package in python.

Results

Categorize the clusters into 3 parts:

- Cluster-0 has only one Casino and no Lounges.
- Cluster-1 has no Casino but fair number of Lounges.
- Cluster-2 has comparatively high number of Lounges.

Results Map



Discussion

- The Cluster-0 has only one Casino and no Lounges.
- The Cluster-1 has fair competition for the Lounges as there are moderate number of Lounges present
- The Cluster-2 is dealing with high competition as large number of Lounges are present in those areas.
- Currently, most of the crowd goes to the areas of the Cluster-2 due to high number of Lounges present there.

Recommendations

- Areas of the Cluster-1 is recommended for the investors to open Casinos.
- Areas of the Cluster-0 is recommended for the investors to open Lounges as there is no Lounge present there.
- Avoid opening Lounges to the Cluster-2 as there is moderate to high competition.
- Cluster-1 is having fair competition in case of the Lounges, Lounges should be unique here to attempt competition.

Conclusion

- This project presents insights to the investors or the property dealers to invest in the Casino/Lounge in the Kuala Lumpur city.
- The result should be such that the investor should invest wisely to open Casino/Lounge with no or fair competition across the city.
- Clusters have been prepared using K-means machine learning algorithm to avoid opening Casino/Lounge in the overcrowded parts of the city to reduce the competition.
- Cluster-0 is the best location to open Lounges and Cluster-1 and Cluster-2 is good to open Casinos.
- The project adopts the data science practices from the requirement gathering to the proposed solutions.



Thank You